AMENDMENT OF THE CLAIMS

In the claims:

1. (Currently Amended) A composition of a fiber reinforced laminate material for a compression molding or thermoforming process, said composition of the laminate material comprising:

a) a layer comprised of a thermoplastic resin;

b) a layer ~~comprised of~~ a polymerizable component comprised of a macrocyclic oligoester having a melt temperature ~~chemically reactive components~~; and

c) a layer of reinforcing fibers that are permeable to impregnation / saturation by the thermoplastic resin and the polymerizable component at the melt temperature of the polymerizable component, said thermoplastic resin, polymerizable component and reinforcing fibers layers fusing and reacting forming a composite that has a surface rich in polymerized macrocyclic oligoester.

~~wherein the layer of reinforcing fibers is permeable to impregnation/saturation by the thermoplastic resin and the polymerizable component, when the laminate material is under heat and compression; and~~

~~wherein upon attaining a melt temperature in a mold, the polymerizable component has a lower viscosity than the thermoplastic resin, and under compression the layers fuse forming a composite having a surface rich in the polymerizable component, where the polymerizable component polymerizes during formation of the composite.~~

2. (Withdrawn) A composition of a fiber reinforced laminate material according to claim 1, wherein the layer of thermoplastic resin further comprises a polymerization agent.

3. (Withdrawn) The composition of a fiber reinforced laminate material, as claimed in claim 2, wherein the polymerization agent is selected from the group consisting of initiators, accelerators, cross-linkers, catalysts, drying agents or a combination thereof.

4. (Currently Amended) The composition of a fiber reinforced laminate material, as claimed in claim 1, wherein the layer of a polymerizable component is further comprised of an additional chemically reactive component ~~components are~~ selected from the group consisting of ~~low molecular weight polymers, macrocyclic oligomers,~~ linear oligomers, prepolymers, monomers, ~~cyclic esters,~~ dimers, trimers, ~~tetramers~~ and the like, or any combination thereof.

5. (Currently Amended) A composition of a fiber reinforced laminate material, according to claim 1, wherein the layer of a polymerizable component ~~chemically reactive components~~ is further comprised of a thermoplastic polymer.

6. (Currently Amended) The composition of a fiber reinforced laminate material, as claimed in claim 5, wherein the polymerizable component is further comprised of additional chemically reactive components ~~are~~ selected from the group consisting of ~~low molecular weight polymers, macrocyclic oligomers,~~ linear oligomers, prepolymers, monomers, ~~cyclic esters,~~ dimers, trimers, ~~tetramers~~ and the like, or any combination thereof.

7. (Original) The composition of a fiber reinforced laminate material, as claimed in claim 1, wherein the reinforced fiber layer is comprised of fibers selected from the group consisting of glass fibers, metal fibers, ceramic fibers, carbon fibers, aramid fibers, synthetic polymers made from polymers such as polyester, polypropylene, polyamides, polyimides, and polyurethanes, and blends and combinations thereof.

8. (Previously Presented) The composition of a fiber reinforced laminate material, as claimed in claim 7, wherein the reinforced fiber layer is comprised of fibers that are selected from the group consisting of long, short, chopped, matted, picked, bonded, woven, and otherwise processed to facilitate handling, saturation, cost, strength and orientation.

9. (Original) The composition of a fiber reinforced laminate material, as claimed in claim 1, wherein the reinforced fiber layer is a glass mat.

10. (Original) The composition of a fiber reinforced laminate material, as claimed in claim 1, wherein the thermoplastic resin is selected from the group consisting of polyolefins; polyesters, polyurethanes, polyacrylates, copolymers, terpolymers ionomers of copolymers.

11. (Original) The composition of a fiber reinforced laminate material, as claimed in claim 10, wherein the thermoplastic polyolefin resin is selected from the group consisting of polypropylenes, ethylene propylene copolymers, ethylene propylene diene monomer, TPCs and TPEs.

12. (Original) A composition of a fiber reinforced laminate material according to claim 1, wherein the layer of thermoplastic resin further comprises other additives selected from the group consisting of reinforcing fibers, extenders which are fillers, antioxidants, UV stabilizers, thermal stabilizers, flame retardants, fillers which are reinforcing, glass beads, colorants, antimicrobial agents, dyes, pigments, plasticizers, oils, impact modifiers, processing aides (i.e. waxes, fluorinated compounds, silicone compounds, surfactants, polymeric processing aides), density modifiers such as phenolic beads, desiccants, buffers, and IR absorbent compounds to facilitate heating (i.e. carbon blacks, graphite, metal oxides).

13. (Original) A composition of a fiber reinforced laminate material according to claim 1, wherein the layer of polymerizable components further comprises other additives selected from the group consisting of reinforcing fibers, extenders which are fillers, antioxidants, UV stabilizers, thermal stabilizers, flame retardants, fillers which are reinforcing, glass beads, colorants, antimicrobial agents, dyes, pigments, plasticizers, oils, impact modifiers, processing aides (i.e. waxes, fluorinated compounds, silicone compounds, surfactants, polymeric processing aides), density modifiers such as phenolic beads, desiccants, buffers, and IR absorbent compounds to facilitate heating (i.e. carbon blacks, graphite, metal oxides).

14. (Original) A composition of a fiber reinforced laminate material according to claim 1, wherein the layer of reinforcing fibers comprises other additives selected from the group consisting of extenders which are fillers, antioxidants, UV stabilizers, thermal stabilizers, flame retardants, fillers which are reinforcing, glass beads, colorants, antimicrobial agents, dyes, pigments, plasticizers, oils, impact modifiers, density modifiers such as phenolic beads, desiccants, buffers, and IR absorbent compounds to facilitate heating (i.e. carbon blacks, graphite, metal oxides).

Claims 15- 25 (Canceled)

26. (Original) The composition of a fiber reinforced laminate material, as claimed in claim 10, wherein the polyester resin is selected from the group consisting of polycarbonate, polyethylene terephthalate, polybutylene terephthalate or blends thereof.

27. (Previously Presented) The composition of a fiber reinforced laminate material as claimed in claim 1, wherein said surface is substantially fiber free.

28. (Canceled)

29. (Withdrawn) The composition of a fiber reinforced laminate material, as claimed in claim 2, wherein the thermoplastic resin is polycarbonate.

30. (Withdrawn) The composition of a fiber reinforced laminate material, as claimed in claim 2, wherein the polymerization agent is a transesterification catalyst.

31. (Withdrawn) The composition of a fiber reinforced laminate material, as claimed in claim 30, wherein the transesterification catalyst is a titanate ester.

32. (Withdrawn) The composition of a fiber reinforced laminate material, as claimed in claim 31, wherein the titanate ester is isopropyl triethanolaminatotitanate.

33. (Canceled)

34. (Currently Amended) The composition of a fiber reinforced laminate material, as claimed in claim 1 ~~33~~, wherein the macrocyclic oligoester is selected from the group consisting of 1,4-butylene terephthalate (CBT), 1,3-propylene terephthalate (CPT), 1,4-cyclohexylenedimethylene terephthalate (CCT), ethylene terephthalate (CET), 1,2-ethylene 2,6-naphthalenedicarboxylate (CEN), macrocyclic oligoesters of polyethylene isophthalate, sulfonated polyethylene isophthalate, sulfonated polyalkylene terephthalate, sulfonated polyalkylene naphthenate, and sulfonated polyalkylene isophthalate.

35. (Currently Amended) The composition of a fiber reinforced laminate material, as claimed in claim 1, wherein said macrocyclic oligoester ~~polymerizable component~~ is 1,4-butylene terephthalate (CBT).

36. (Currently Amended) The composition of a fiber reinforced laminate material, as claimed in claim 1, wherein said polymerizable component further comprises a polycarbonate.

37. (Currently Amended) The composition of a fiber reinforced laminate material, as claimed in claim 36, wherein the polycarbonate on a weight basis the polycarbonate is greater than 50% ~~comprises greater 50%~~ of ~~the~~ a total weight of the polymerizable component layer.

38. (Withdrawn) The composition of a fiber reinforced laminate material, as claimed in claim 1, wherein the thermoplastic resin is a polycarbonate resin having a MFI greater than 5.

39. (Original) The composition of a fiber reinforced laminate material, as claimed in claim 34, wherein the macrocyclic oligoester has a repeating structural unit of 3 - 20 units.

40. (Withdrawn) The composition of a fiber reinforced laminate material, as claimed in claim 30, wherein the transesterification catalyst is admixed with the thermoplastic resin.

41. (Withdrawn) The composition of a fiber reinforced laminate material, as claimed in claim 40, wherein the weight percentage of transesterification catalyst in the layer of thermoplastic resin is less than 1%.

42. (Withdrawn) The composition of a fiber reinforced laminate material, as claimed in claim 40, wherein the weight percentage of glass fiber of the weight of the composite material is 15% to 35%.

43. (Withdrawn) A composition of a fiber reinforced laminate material for a compression molding or thermoforming process, said composition of the laminate material comprising:

a) an upper overlayer comprised of a thermoplastic resin and a polymerization agent;

b) a upper layer of reinforcing fibers;

c) a core layer comprised of a polymerizable component comprised of chemically reactive componentst;

d) a lower layer of reinforcing fibers;

e) a lower overlayer comprised of a thermoplastic resin;

wherein the layers of reinforcing fibers are permeable to impregnation/saturation by the thermoplastic resin and the polymerizable component, when the laminate material is under heat and compression; and

wherein upon attaining a melt temperature in a mold, the polymerizable component has a lower viscosity than the thermoplastic resin, and under compression the layers fuse forming a composite having a surface rich in the polymerizable component, where the polymerizable

component polymerizes during formation of the composite.

44. (Withdrawn) The composition of a fiber reinforced laminate material, as claimed in claim 43, wherein the thermoplastic resin is a polycarbonate resin having a MFI greater than 5.

45. (Withdrawn) The composition of a fiber reinforced laminate material, as claimed in claim 43, wherein the polymerizable component is a macrocyclic oligoester.

46. (Withdrawn) A composition of a fiber reinforced laminate material according to claim 43, wherein the layers of thermoplastic resin further comprise a polymerization agent.

47. (New) A composition of a fiber reinforced laminate material for a compression molding or thermoforming process, said composition of the laminate material comprising:

a) an upper overlayer comprised of a thermoplastic resin;

b) a upper layer of reinforcing fibers;

c) a core layer of a polymerizable component comprised of a macrocyclic oligoester having a melt temperature;

d) a lower layer of reinforcing fibers, where the upper and lower layers of reinforcing fibers are permeable to impregnation / saturation by the thermoplastic resin and the polymerizable component at the melt temperature of the macrocyclic oligoester; and

e) a lower overlayer comprised of a thermoplastic resin;

where said thermoplastic resin, polymerizable component and reinforcing fibers layers fuse and react at the melt temperature forming a composite that has a surface rich in polymerized macrocyclic oligoester.

48. (New) The composition of a fiber reinforced laminate material, as claimed in claim 47, wherein the polymerizable component is further comprised of additional chemically reactive components selected from the group consisting of linear oligomers, prepolymers, monomers, dimers, trimers, and the like, or any combination thereof.

49. (New) The composition of a fiber reinforced laminate material, as claimed in claim 47, wherein the thermoplastic resin is a polycarbonate resin having a Melt Flow Index greater than 5

50. (New) The composition of a fiber reinforced laminate material, as claimed in claim 47, wherein the weight percentage of glass fiber of the weight of the composite material is 15% to 35%.

51. (New) The composition of a fiber reinforced laminate material according to claim 1, wherein the layer of thermoplastic resin further comprises a polymerization agent.

52. (New) The composition of a fiber reinforced laminate material according to claim 47, wherein at least one overlayer of thermoplastic resin further comprises a polymerization agent.

53. (New) The composition of a fiber reinforced laminate material, as claimed in claim 51, wherein the polymerization agent is a transesterification catalyst.

54. (New) The composition of a fiber reinforced laminate material, as claimed in claim 52, wherein the polymerization agent is a transesterification catalyst.